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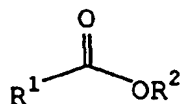
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ning of each regular issue of the PCT Gazette.

(54) Title: BITUMEN COMPOSITION



(I)

(57) **Abstract:** The present invention provides a bitumen composition compris-  
ing: -(i) from 0.1 to 25 % wt of an elastomer, (ii) from 0.1 to 40 % wt of a solvent,  
(iii) from 30 to 99 % wt of a bitumen, (iv) from 0.1 to 30 % wt of a lithium salt of  
a C<sub>10</sub>-C<sub>40</sub> fatty acid or hydroxy fatty acid, and optionally (v) from 0 to 70 % wt of  
a filler, all weights based on total bitumen composition, wherein the solvent is of  
general formula (I), wherein R<sup>1</sup> represents a hydrogen atom or a hydrocarbyl group having from 1 to 6 carbon atoms, R<sup>2</sup> represents  
a hydrocarbyl group having from 1 to 6 carbon atoms, and the sum of the carbon atoms in R<sup>1</sup> and R<sup>2</sup> is from 5 to 7; a process of  
preparing said bitumen composition and the use of the composition as a cold-applicable adhesive.

# INTERNATIONAL SEARCH REPORT

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A. CLASSIFICATION OF SUBJECT MATTER  
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According to International Patent Classification (IPC) or to both national classification and IPC

## B. FIELDS SEARCHED

Minimum documentation searched (classification system followed by classification symbols)

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Documentation searched other than minimum documentation to the extent that such documents are included in the fields searched

Electronic data base consulted during the International search (name of data base and, where practical, search terms used)

EPO-Internal

## C. DOCUMENTS CONSIDERED TO BE RELEVANT

| Category * | Citation of document, with indication, where appropriate, of the relevant passages  | Relevant to claim No. |
|------------|---|-----------------------|
| A          | EP 0 037 136 A (SHELL INT RESEARCH)<br>7 October 1981 (1981-10-07)<br>cited in the application<br>page 2, line 14 -page 6, line 28<br>----- |                       |

☐ Further documents are listed in the continuation of box C.

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Information on patent family members

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|---|---------------------|----------------------------|---------------------|
| EP 0037136                                | A                   | 07-10-1981                 |                     |
|   |                     | AU 535863 B2               | 05-04-1984          |
|   |                     | AU 6889281 A               | 08-10-1981          |
|   |                     | CA 1149990 A1              | 12-07-1983          |
|   |                     | DE 3161858 D1              | 16-02-1984          |
|   |                     | EP 0037136 A1              | 07-10-1981          |
|   |                     | JP 1623733 C               | 18-11-1991          |
|   |                     | JP 2042862 B               | 26-09-1990          |
|   |                     | JP 56151760 A              | 24-11-1981          |
|   |                     | MY 61285 A                 | 31-12-1985          |
|   |                     | NZ 196666 A                | 18-11-1983          |
|   |                     | SG 27884 G                 | 04-01-1985          |
|   |                     | US 4332703 A               | 01-06-1982          |
|   |                     | ZA 8102098 A               | 28-04-1982          |